

ABSTRACT

CREATIVE PROJECT (6): Ecological Stormwater Systems: A Design Precedent at

Crystal Glen Apartments in Anderson, Indiana

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This landscape architecture study proposed a retrofit design for a ten acre site containing nine multi-family apartment buildings in Anderson, Indiana. The site was chosen because it has a diverse land-use context which displayed common environmental and socio-economic problems found throughout Anderson. The creative project was a plan designed to reduce stormwater runoff quantities to predevelopment rates for a ten year one hour storm event while also improving stormwater quality. One strategy used to meet stormwater goals was low impact development (LID). Another goal was to conserve energy and resources on site using a community garden. The final aspiration was to recommend transformations of the landscape to improve the quality of life for apartment residents and surrounding neighbors.

These goals were created through a thematic study of literature on stormwater problems such as combined sewer overflow and non-point source pollution, an examination of the term “ecological”, a case study on the High Point residential

redevelopment in Seattle, Washington, and a site inventory and analysis of the apartment complex and its context.

This creative project has defined and designed an ecological stormwater system. The design products enclosed include a master plan and numerous perspectives, construction documents, and stormwater runoff calculations for predevelopment rates, developed rates, and ecological stormwater retrofit rates for the site. The retrofit design hypothetically achieves the stormwater runoff quantity goals. Water quality measurements are out of the scope of this project therefore not calculated. The ecological stormwater system design suggests site improvement which could create a new sense of place for a positive, healthy, and educational quality of life, while serving as an example for solving similar site design and stormwater management problems.

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